

400M/MP Sky4HD Setup Guide.

Note: Intended to be used in conjunction with the Operators Manual.

Primary input voltage connection

The 400M/MP are equipped with a three-conductor with earth power cable that is connected at the welding power source end for single and three phase electrical input power. For Single-Phase operation connect the GREEN, BLACK and WHITE input conductors. Insulate the RED conductor, it is not used for single-phase operation. The welding power source will not operate properly if the BLACK or WHITE wire is exchanged for the RED wire in single-phase operation.

Do not connect an input (WHITE or BLACK or RED) conductor to the ground terminal.

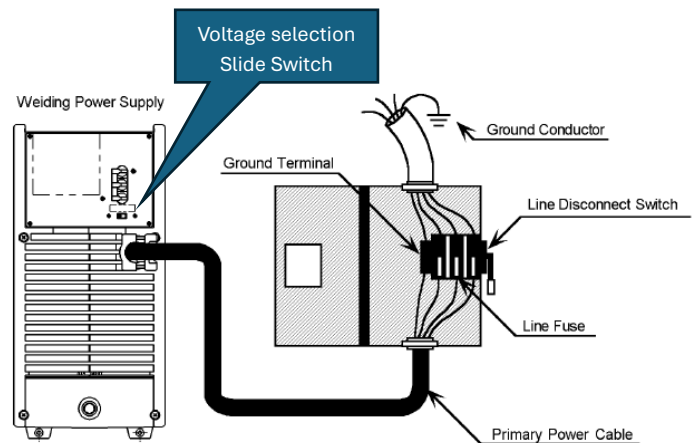
Do not connect the ground (GREEN) conductor to an input line terminal.

Refer to figure at right and:

1. Use Voltage selection slide switch located under the ON/OFF Switch to select input voltage range.
2. Connect end of ground (GREEN) conductor to a suitable ground. Use a grounding method that complies with all applicable electrical codes.
3. Connect the other lines as follows:
 - a. For three-phase input connections: Connect the ends of line 1 (BLACK) and line 2 (WHITE) and line 3 (RED) input conductors to a de-energized line disconnect switch.
 - b. For single-phase input connections: Connect the ends of line 1 (BLACK) and line 2 (WHITE) input conductors to a de-energized line disconnect switch. Insulate the end of line 3 (RED) conductor, as it is not used for single-phase operation.

Note: See manual section 3 for detailed primary and fusing instructions.

Caution: Damage to the Power Supply could occur if 575VAC or higher is applied.



MIG operation

The 14 Pin receptacle is compatible with many competitive wire feeders and remotes. See Operation manual section 4 for the receptacle layout. Sanrex recommends using a coax interconnect cable when using the Sanrex Sky 4HD wire feeder. The Coax is a one-piece interconnect cable hose including welding power, gas hose and control signals.



Interconnect Coax

Connect Female Dinse plug to back of wire feeder control box along with Gas hose and 14 Pin receptacle. Connect Male Dinse plug to 400M/MP front panel positive receptacle, 14 Pin plug to 14 pin receptacle on front panel and gas hose to shielding gas source.

The Sanrex 4HD is provided with 0.035" and 0.045" Style 1 hard wire drive rolls. Other drive roll sizes and styles are available.

Drive Roll Selection Chart		FLAT	DOUBLE SMOOTH VEE	FLAT	DOUBLE KNURLED VEE	FLAT
		DOUBLE SMOOTH VEE	DOUBLE SMOOTH VEE	DOUBLE KNURLED VEE	DOUBLE KNURLED VEE	DOUBLE "U"
Style		1	2	3	4	5
Top		Flat	Double Smooth "V"	Flat	Double Knurled "V"	Flat
Bottom		Double Smooth "V"	Double Smooth "V"	Double Knurled "V"	Double Knurled "V"	Double "U"
Wire Type		Hard	Soft/Hard/Tubular	Hard/Tubular	Hard/Tubular	Soft (Aluminum)
Wire Size						
0.6 mm (.023/.025)	Top	WFR101	-	-	-	-
	Bottom	WFR001 (0.6)	-	-	-	-
0.8 mm (.030)	Top	WFR101	-	-	-	-
	Bottom	WFR001 (0.8)	-	-	-	-
0.9 mm (.035)	Top	WFR101	WFR001 (0.8)	WFR101	-	-
	Bottom	WFR003 (0.9)	WFR001 (0.8)	WFR007 (0.9)	-	-
1.2 mm (.045)	Top	WFR101	WFR003 (0.9)	WFR101	WFR007 (0.9)	WFR101
	Bottom	WFR003 (1.2)	WFR003 (0.9)	WFR007 (1.2)	WFR007 (0.9)	WFR016 (1.2)
1.6 mm (1/16")	Top	WFR101	WFR005 (1.2)	WFR101	WFR007 (1.2)	WFR101
	Bottom	WFR005 (1.6)	WFR005 (1.2)	WFR010 (1.6)	WFR007 (1.2)	WFR016 (1.6)
2.0 mm (5/64")	Top	-	WFR005 (2.0)	WFR101	WFR010 (1.6)	-
	Bottom	-	WFR005 (2.0)	WFR013 (2.0)	WFR010 (1.6)	-

Style 1 & 3: Standard Preferred for general fabrication.
Style 2 & 4: Alternative for poor wire feedability.
Style 5: Aluminum Applications.

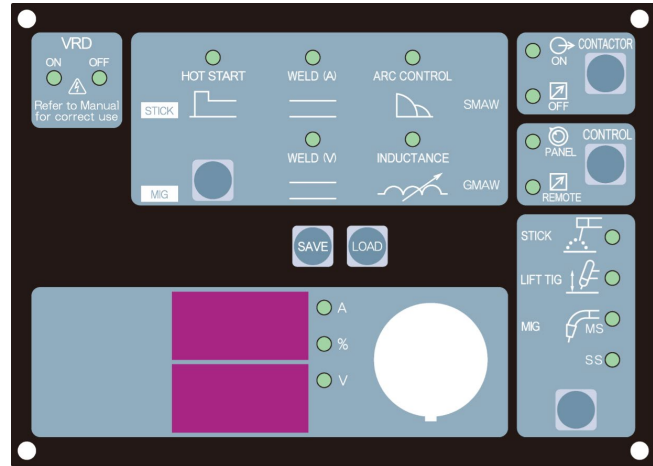
WFRxxx (x.x) Denotes Drive Roll groove to use.

400M/MP operation with the Sanrex Sky 4HD:

Contact – (Upper right corner) Set OFF.
Lower indicator illuminated.

Control – (Located under Contactor) Set Panel (Upper indicator illuminated) Adjust CV Voltage from 400M/MP.

To adjust CV welding voltage from Sky 4HD set to Remote (Lower indicator illuminated). Note: For full CV Voltage control at Sky4HD set 400M/MP output to maximum CV Voltage. To perform this adjustment set Control to Panel (Upper indicator illuminated) and turn encoder knob till 400M/MP reads maximum CV voltage on digital meter. Set Control back to Remote. Full CV Voltage control is now available on the Sky 4HD.



Process selection – (Bottom right) There are two CV MIG options, MS or SS. MS is for mild steels, SS is for Stainless Steels. VRD, HOT START, WELD (A), ARC CONTROL not used in CV Modes. WELD (V) indicates set CV Voltage and actual welding voltage while welding on the digital meter. INDUCTANCE is to fine tune the Short Arc process. A good starting point is 40%. A higher percentage will give you a softer welding arc, conversely a lower percentage will give you a harsher welding arc.

Sky 4HD Panel – See Operators manual for detail operation.



1. Digital Volt and Ammeter – Volt meter will show CV Preset voltage and actual voltage while welding. Ammeter will show actual welding amperage while welding. To set Wire feed speed use the A/IPM push button switch (8) to toggle to IPM. Wire feed speed will show in IPM (Inches Per Minute) on digital meter.
2. Trigger Latch switch - Most common in 2T position.
3. Gas Purge/Inch Switch – Used to purge shielding gas and inch welding wire. Note: The Sky 4HD has a slow run in circuit. When inching the wire starts feeding slow then will speed up. After several seconds the wire will stop feeding. Just press the

inch button to resume wire feed inching. The welding wire will also stop after several seconds with the gun trigger closed. This is a built-in safety.

4. Remote CV Voltage Control – Set to desired welding voltage as indicated on digital meter. 400M/MP will show the same plus/minus 0.5 volt.
5. Wire Feed speed adjustment in IPM. Set to desired IPM as indicated on digital meter.
6. MIG Gun receptacle – The Sky 4HD has three receptacle configurations. Tweco style, Miller Style and Euro style.
7. Gun Trigger receptacle – 4 pin trigger plug.

Note: The 400MP has the addition of MIG Pulse. The CV Mig option SS is replaced with MIG pulse selection. See 400MP Operation Manual for Pulse detail instructions.

STICK Operation

Set polarity according to Electrode being used. Reverse Polarity would be with Electrode lead in the positive receptacle. For straight polarity would be with the electrode lead in the Negative Receptacle.

Bottom Right set STICK mode. STICK indicator will be illuminated.

MIG WELD (V) and INDUCTANCE are not used. VRD is a safety circuit for STICK operation. It is set from the Factory to OFF. See Operation manual for detail.

Hot Start – Adds additional current to help ignite the electrode.

WELD (A) when illuminated use the encoder knob to set welding amperage.

ARC CONTROL – Set the amount if DIG/Arc Force of the electrode. Higher the setting the more DIG/Force is applied to the electrode.

TIG Operation

DC only with TIG Torch set for Straight Polarity. TIG Torch connected to the Negative Receptacle. There is no TIG Gas Valve included in the 400M/MP. Use a TIG Torch with a gas valve in the Torch Head.

Bottom Right set LIFT TIG Mode. Lift TIG indicator will be illuminated. See the operation manual for proper Lift TIG operation.

